

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: William FORD et al.

U.S. Serial No.: Filed Concurrently Herewith

Title of Invention: PROCESS FOR IMMOBILIZATION OF NUCLEIC
ACID MOLECULES ON A SUBSTRATE

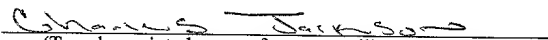
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PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Box Patent Application (35 U.S.C. 111)
Washington, D.C. 20231

Sir:

Before the issuance of the first Office Action, please amend the above-identified application as follows:

IN THE CLAIMS:

Please amend claims 3-5, 7-11 and 13 as follows:

3. (Amended) Process according to claim 1, characterized in that the nucleic acid is double-stranded or single-stranded.

4. (Amended) Process according to claim 1, characterized in that the nucleic acid is of natural character, modified, such as substituted with functional groups, non-modified or artificially generated.
5. (Amended) Process according to claim 1, characterized in that the substrate is a single crystal surface or an amorphous surface.
7. (Amended) Process according to claim 1, characterized in that microwave generated oxygen plasma producing atomic oxygen or a mixture of gases containing oxygen is used.
8. (Amended) Process according to claim 1, characterized in that high-voltage generated and/or UV-light emitting source generated oxygen plasma producing atomic oxygen or a mixture of gases containing oxygen is used.
9. (Amended) Process according to claim 1, characterized in that the substrate is treated with atomic oxygen plasma for about 0.1 to 10 minutes.
10. (Amended) Process according to claim 1, characterized in that the atomic oxygen plasma treatment is carried out using an oxygen pressure in the range of about 0.1 to 1.0 mbar, preferably 0.2 to 0.8 mbar.
11. (Amended) Process according to claim 1, characterized in that the nucleic acid to be immobilized on the substrate is present in an aqueous solution.
13. (Amended) Immobilized nucleic acid obtainable by a process according to claim 1.

REMARKS

Claims 1-14 remain in the application. Claims 3-5, 7-11 and 13 have been amended to eliminate multiple dependencies. Attached hereto is a marked up version of the changes made to claims 3-5, 7-11 and 13 by the current amendment. The attached page is captioned **“Version with markings to show changes made.”** The filing fee has been calculated based upon these amendments to the claims.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP
Attorneys for Applicant

By:



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VERSION WITH MARKINGS TO SHOW CHANGES MADE**In the claims:**

Please amend claims 3-5, 7-11 and 13 as follows:

3. (Amended) Process according to claim 1 ~~or 2~~, characterized in that the nucleic acid is double-stranded or single-stranded.
4. (Amended) Process according to claim 1 ~~any of the preceding claims~~, characterized in that the nucleic acid is of natural character, modified, such as substituted with functional groups, non-modified or artificially generated.
5. (Amended) Process according to claim 1 ~~any of the preceding claims~~, characterized in that the substrate is a single crystal surface or an amorphous surface.
7. (Amended) Process according to claim 1 ~~any of the preceding claims~~, characterized in that microwave generated oxygen plasma producing atomic oxygen or a mixture of gases containing oxygen is used.
8. (Amended) Process according to claim 1 ~~any of the claims 1 to 6~~, characterized in that high-voltage generated and/or UV-light emitting source generated oxygen plasma producing atomic oxygen or a mixture of gases containing oxygen is used.
9. (Amended) Process according to claim 1 ~~any of the preceding claims~~, characterized in that the substrate is treated with atomic oxygen plasma for about 0.1 to 10 minutes.
10. (Amended) Process according to claim 1 ~~any of the preceding claims~~, characterized in that the atomic oxygen plasma treatment is carried out using an oxygen pressure in the range of about 0.1 to 1.0 mbar, preferably 0.2 to 0.8 mbar.
11. (Amended) Process according to claim 1 ~~any of the preceding claims~~, characterized in that the nucleic acid to be immobilized on the substrate is present in an aqueous solution.

13. (Amended) Immobilized nucleic acid obtainable by a process according to claim 1 ~~any of~~
~~claims 1 to 12.~~

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